



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| | | | | |
|--|-------------|----------------------|---------------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/769,532 | 01/30/2004 | Robert G. Whirley | 021630-004500US | 8638 |
| 23869 | 7590 | 01/29/2007 | | |
| HOFFMANN & BARON, LLP 6900 JERICO TURNPIKE SYOSSET, NY 11791 | | | EXAMINER SWEET, THOMAS | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3738 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 01/29/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No. .

10/769,532

Applicant(s)

WHIRLEY ET AL.

Examiner

Thomas J. Sweet

Art Unit

3738

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-35 is/are pending in the application.
- 4a) Of the above claim(s) 22-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed 05/09/2006 have been fully considered but they are not persuasive. Regarding claim 1, Claim 20 was rejected as obvious over Kocur in view of Calcote so claim 1 as amended is now reject as pervious claim 20. Calcote teaches sustained release so, despite the channels being open (i.e. for releasing the material over time) the channels are inflatable. Since, Kocur also is for sustained release the combination with Calcote does not destroy the reference. Regarding claim 21, fusions or adhesive [0028] is one or more connector elements as claimed. As mentioned in the claims or Kocur (e.g. 41) connection to a strut of the stent is a discrete connection the stent and the stent has may struts for connection alone the length including the proximal end.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9, 16, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocur et al in view of Calcote. Kocur et al discloses a graft (fig. 1A) comprising: a graft body 10 section having a proximal end, a distal end, and defining at least one inflatable porous channel 15; a connector member affixed to the proximal or distal end of the graft body section (abstract), the connector member comprising one or more connector elements; a stent comprising one more proximal stent connector elements coupled to the one or more connector

member connector elements (abstract), and an inflation medium including at least one therapeutic agent (abstract) configured to be introduced into the inflatable channel. However, Kocur et al remains silent as to a channel configuration such as at least one inflatable porous cuff disposed at the proximal or distal end of the graft body section and in fluid communication with the at least one channel. Calcote discloses another graft including a channel configuration such as at least one inflatable porous cuff disposed at the proximal 48 and distal end 46 of the graft body section and in fluid communication with the at least one channel 44 for the purpose of distributing drug to the graft ([0027]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the channels of Kocur et al in the configuration of at least one inflatable porous cuff disposed at the proximal and distal end of the graft body section and in fluid communication with the at least one channel as taught by Calcote in order to distributing drug to the graft. Such a modification amounts to mere substitution of one functionally equivalent drug distribution system for another within the art of grafts.

With respect to claim 4, the porous channel has varying levels of porosity ([0062]).

With respect to claims 5 and 6, the graft body section comprises expanded polytetrafluoroethylene ([0054]).

With respect to claims 7 and 8, Kocur et al discloses a graft as discussed above including one of the objects of the Kocur et al reference is to tune release quantities and times (the full disclosure), therefore it would be inherent and would be fully capable of releasing agent into the body lumen ranges from about 10 micrograms to about 100 milligrams and transport into the body lumen in a time period ranging from about seven days to about twelve months.

With respect to claim 9, the at least one therapeutic agent comprises one or more agents selected from the group consisting of an endothelialization promoting agent, an angiogenesis promoting agent, an anti-thrombotic agent, an anti-aneurysmal agent, an anti-infection agent, an anti-inflammatory agent, an anti-restenosis agent, a chemotherapeutic agent, and an anti-cancer agent (several are listed [0037]-[0051]).

With respect to claim 16, the inflation medium comprises a liquid ([0052]).

With respect to claim 19, the channel comprises one or more features selected from the group consisting of helical spirals, longitudinal channels, and circumferential rings (figs. 1-5).

Claims 10, 12-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocur et al in view of Calcote as applied to claim 2 above, and further in view of Rhee et al (US 6051648). Kocur et al discloses a graft as discussed above. However, Kocur et al remains silent as to the use of a host polymer for containing the bioactive materials. It is well known in the art of stents to use a host polymer to contain bioactive materials for the purpose of sustained release over time. Rhee et al demonstrates the use of host polymer (polyethylene glycol) for containing bioactive material(s) in conjunction with a graft (col 18, line 21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize polyethylene glycol as a bioactive delivery material in the graft of Kocur et al in order to sustained release over time. Such a modification amounts to mere substitution of one functionally equivalent bioactive delivery material for another within the art of grafts.

With respect to claim 13, the graft body section would inherently and would be fully capable of inhibiting transport of a bulk of the host polymer, since it is the same material disclosed by the applicant.

With respect to claim 14, the host polymer is fully capable of being introduced into the inflatable channel before, during, or after graft deployment or implantation, since it is initially a liquid, which is injectable.

With respect to claims 17 and 18, polyethylene glycol is a curable liquid which would inherently and would be fully capable of a cure time ranging from about three minutes to about twenty minutes and a post-cure elastic modulus ranging from about 50 psi to about 400 psi, since it is the same material disclosed by the applicant.

Claims 10-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocur et al in view of Calcote as applied to claim 2 above, and further in view of Pacetti et al (US 6663662). Kocur et al discloses a graft as discussed above. However, Kocur et al remains silent as to the use of a host polymer for containing the bioactive materials. It is well known in the art of stents to use a host polymer to contain bioactive materials for the purpose of sustained release over time. Pacetti et al demonstrates the use of host polymer (polyethylene-co-vinyl alcohol, in the summary of the invention) for containing bioactive material(s) in conjunction with a graft (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize polyethylene-co-vinyl alcohol as taught by Pacetti as a bioactive delivery material in the graft of Kocur et al in order to sustained release over time. Such a modification amounts to mere substitution of one functionally equivalent bioactive delivery material for another within the art of grafts.

With respect to claim 13, the graft body section would inherently and would be fully capable of inhibiting transport of a bulk of the host polymer, since it is the same material

Art Unit: 3738

disclosed by the applicant.

With respect to claim 14, the host polymer is fully capable of being introduced into the inflatable channel before, during, or after graft deployment or implantation.

Conclusion

This is a RCE of applicant's earlier Application No. 10/769532. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Sweet whose telephone number is 571-272-4761. The examiner can normally be reached on 5:45am - 4:15pm, Tu-Th.

Art Unit: 3738

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine M. McDermott can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

tjs



CORRINE McDERMOTT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700